Office of Economic Recovery & Investment

THE GOVERNOR'S BROADBAND TECHNOLOGY OPPORTUNITY COMMITTEE

Report to Governor Perdue

April 2010

OFFICE OF ECONOMIC RECOVERY AND INVESTMENT REPORT:

THE GOVERNOR'S BROADBAND TECHNOLOGIES OPPORTUNITY COMMITTEE

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Report from the meetings of the Governor's Broadband Technology Opportunities Program (BTOP) Review Committee

1. Program Background

The American Recovery and Reinvestment Act was signed by President Obama on February 18, 2009. Part of the bill directed $7.2 billion into two interrelated programs: the Broadband Initiatives Program (BIP) and the Broadband Technology Opportunities Program (BTOP). The programs were to be administered by the USDA Rural Utilities Service and the U. S. Department of Commerce National Telecommunications and Information Administration (NTIA). The statutory goal of these programs is to expand broadband access to unserved and underserved communities across the U.S., increase jobs, spur investments in technology and infrastructure, and provide long-term economic benefits.

In Round 1 the BIP/BTOP programs were jointly administered by the two federal agencies, and a single Notice of Funding Availability (NOFA) and application were released on July 1, 2009. The NOFA described a review process that allowed for input by Governors on BTOP, and Governor Perdue has received a list of the applications pertaining to North Carolina that are under consideration by NTIA. This process was designed to give the NTIA feedback from the Chief Executive's perspective on which projects would have the highest benefits to a given state, including economic impact, and to provide information on the working relationship between applicants and a given state.

The North Carolina Office of Economic Recovery and Investment, under the direction of Governor Perdue, established the BTOP Review Committee to review and provide a report to the Governor in advance of her comment to NTIA. The BTOP Review Committee reviewed all applications that were submitted to the committee, and made several recommendations to the Governor. The Governor accepted these recommendations and adopted these recommendations in her comments to NTIA, with a special emphasis on the MCNC middle-mile proposal.

North Carolina fared extremely well in Round 1 of BTOP funding. Both the primary recommendation of the Infrastructure, the MCNC proposal, and the Public Computer Center, the Mitchell County Courthouse project, subcommittees received full funding.

Round 2 Changes

The primary change in the BTOP program in Round 2 is the de-coupling of the BTOP and the BIP programs. In Round 2 the Broadband Technology Opportunities Program and the Broadband initiatives Program were no longer administered as a unified program with different funding sources. New NOFAs and application procedures were released for BTOP and BIP in Round 2. The changes primarily affect the Infrastructure program. Underserved and unserved last mile implementation was reserved for the BIP Grants, and the new BTOP Comprehensive Community Infrastructure Program focused on larger, multi area middle-mile applications.

The second major change in Round 2 is the matching requirement. Round 1 had a matching requirement of 20%, with programs receiving higher scores if they had an in-kind or in-cash

contribution of 30%. In Round 2, the statutory requirements of a 20% match has not changed, but the NTIA made clear in workshops and public statements that projects need to have A MINIMUM of 30% funding to be in a position to be funded. Projects with match of above 30% receive additional consideration, and as in Round 1, in-cash matches are considered more valuable than in-kind.

The final major change in Round 2 was the shift from smaller, localized or self-contained projects to fewer, larger or more comprehensive projects. The Round 2 focus was described in a quote from Larry Strickling, Assistant Secretary of NTIA and head of BTOP:

> "The **strongest proposals** are the ones that have taken a truly <u>comprehensive</u> view of the <u>communities</u> to be served and have engaged as <u>many key members</u> of the communities as possible in developing the projects"

Similarly to Round 1, Governor Perdue is encouraged to provide a list and prioritization of recommended projects, along with an explanation of why the selected proposals meet the greatest needs of the state. States have been strongly encouraged to provide information to support their recommendations. Recommendations are due by May 3rd at close of the business day.

2. Committee Purpose and Process

Governor Perdue established a blue ribbon committee to assist her in the review and comment of North Carolina service area BTOP applications. The North Carolina BTOP Review Committee was comprised of leaders from the public, private and nonprofit sectors who are familiar with the connectivity challenges that exist in North Carolina. This eight-member committee self-selected on the basis of expertise and interest into two sub-committees, one with responsibility for reviewing applications in both the **Public Computing Center** and the **Sustainable Broadband Adoption** categories. The other subcommittee was responsible for the new **Comprehensive Community Infrastructure** category. Technical and Administrative Support was supplied by the e-NC Authority.

The NTIA provided the list of applicants, contact information for each applicant, and an executive summary for each project, *but did not provide access to the full application or other necessary documents*. The e-NC Authority used the list of North Carolina Service Area applications provided by NTIA to create a listserv of application contacts. Requests for information were sent to every applicant on the listserv for a copy of an applicant's full BTOP application. Special consideration was given to confidential or proprietary information contained in applications, and applicants were asked to mark which portions of applications would not fall under North Carolina's Public Records Law. The e-NC Authority placed the applications into a password-protected database that could only be accessed by members of the applicable sub-committee.

Members of each sub-committee reviewed applications using scoring sheets based on NTIA's scoring sheets, which were developed through internal discussions during Round 1. The scoring sheets reflected the four main areas of review of BTOP applications, in all three funding

categories. The BTOP Review Committee analyzed each available application, scoring on the following categories based on the North Carolina impact of the program.

Project Purpose

A project should supply a narrative description of a project using three major factors:

1. Identify and explain a problem that exists
2. A solution is identified and how the problem will be solved is described, how this solution is different from previous attempts to solve the problem.
3. Explain why the applicant is uniquely suited to solve the problem/implement the solution, including proof that the application has the capacity to handle the project and reporting requirements.

Project Benefits

This is the description of benchmarks the applicant foresees as it solves the problem/implements the solution outlined in the Project Purpose. The applicant should provide a list of metrics involved with the project, and a strategic plan on delivering benefits at different points in the project implementation

Project Viability

This is data to support the viability of not only the project, but the applicant. The primary focus is on a comprehensive project plan, with details on the various components of the solution. A high-scoring BTOP project should have a series of models and test cases to act not only as a successful program, but to serve as a test case for future programs. A clear description of the program allows the reviewer to see how the program works and how it might be replicated elsewhere. Also important to the "applicant viability" is the experience of the management team of the project, the history of the organization, and the individual program management team.

Project Budget and Sustainability

A project should have a viable Budget and Audit section. Successful BTOP projects should outlive their initial grant investments, and provide benefits beyond the life of the grants. Applicants should have broad community support from public, private, and governmental entities, high level of cost match (in-cash if possible), credible assumptions about build/project costs and future maintenance costs, and a reasonable project scope for the funding requested.

Additionally, the NTIA highlighted specific "Keys to Sucess" for each of the three funding categories, which were reviewed by the BTOP Review Committee prior to the review process:

- Public Computer Center (PCC)
  1. Specific Training and Education Programs
  2. Compelling Outreach Plan
  3. Evidence of Appeal to Target Populations
  4. Technical Support Resources
  5. Explanation of Proposal's Impact on Center's Overall Mission

- Sustainable Broadband Adoption (SBA)
  1. Efforts to Educate, Train, Equip and/or Support New Broadband Subscribers
  2. Plan for Measuring the New Broadband Subscribership
  3. Evidence that Your Specific Approach Will Be Effective
  4. Confirm that Broadband Service is Available
  5. Illustrate On-Going Benefits of Building Capacity within Existing Community Support Organizations

- Comprehensive Community Infrastructure (CCI)
  1. Commitment to offer new/upgraded service to community anchor institutions
  2. Incorporate a public-private partnership
  3. Bolster growth in economically distressed areas
  4. Commitment to serve community colleges
  5. Commitment to serve public safety entities
  6. Last Mile: Either
     a. Applicant includes Last Mile infrastructure in un/underserved areas as part of project (no more than 20% of the total project cost if Last Mile rural); or
     b. Applicant provides commitments or non-binding letters of intent from one or more Last Mile broadband service providers

The Public Computer Center/Sustainable Broadband Adoption Subcommittee

Introduction

The PCC/SBA Sub-committee reviewed projects in two funding categories: The Public Computer Center Applications and the Sustainable Broadband Adoption Applications. While at the federal level the review process of these two funding categories do not overlap, the high rate of interconnectedness and project scope of the application types made the combining of these two program types necessary. Staff of the e-NC Authority provided administrative support to the Office of Economic Recovery and Investment (OERI) and, upon request, technical advice to the Infrastructure Review Committee.

a. Membership

Members of the SBA/PCC Sub-committee and their professional affiliation included the following:

- Cynthia Marshall—President, AT&T North Carolina

- Dr. Lee Mandell—UNC-Chapel Hill School of Government and Former North Carolina League of Municipalities Research Director

- Terry Bledsoe—Chief Information Officer for Catawba County

- Paul Tine—Chair of the Outerbanks Chamber of Commerce and Economic Developer

b. Process

A total of 10 Public Computing Center (PCC) applications were included in the list forwarded by the NTIA. Of that total, 9 applications responded to e-NC's request for application. The following applications were reviewed and scored by the PCC/SBA Subcommittee:

- South Piedmont Community College
- Elauwit Community Enhancement Foundation Inc
- ClearTalk/NTCH Inc
- Winstonnet Inc
- NCDCR/State Library Program

- Olive Hill Economic Development
- Greater Lansing Area Development
- Surry Community College
- County of Guilford

A total of 24 Sustainable Broadband Adoption (SBA) applications were included in the list forwarded by the NTIA. Of that total, 21 applications responded to e-NC's request for application.

The following applications were reviewed and scored by the PCC/SBA Subcommittee:

- Brinksman Consulting and Trading Group
- Socket Mobile INC
- One Economy Corporation
- Union County Board of Education
- XW
- Communityvine Inc
- Empirix Inc
- Network Foundation Technologie
- CA Technology Inc

- Communication Service For The Deaf Inc
- University of North Carolina at Pembroke
- Broadband Alliance
- Ikoring LLC
- Mountain Area Information Network
- America 2.0 Inc
- County Executives Telecommunications
- Elauwit

The Public Computer Center/Sustainable Broadband Adoption Sub-committee met on Wednesday, April 21, 2010 at the North Carolina Rural Center to discuss applications. The sub-committee used the scoring sheet that had been developed in Round 1 to score applications based on the factors listed above, focusing only on an application's North Carolina impact. Unlike Round 1, where the number of applications forced the PCC/SBA to limit discussion to only top scoring applications, the limited number of Round 2 applications allowed for a discussion of the committee's ranking of every submitted application.

An announcement of the public meeting was placed on tthe OERI Web site www.ncrecovery.gov, and was open to the public. Since several of the applications were multi-state or national, the meeting was also the subject of a webinar with a call-in number. Sign-in directions were sent directly to applicants. Webinar information was also placed on the OERI Web site so that applicants and the general public could attend virtually and make comments online or over the phone.

The recommendations of the PCC/SBA Subcommittee are discussed in Sections 3 and 4.

Comprehensive Community Infrastructure Subcommittee

b. Introduction

The CCI Sub-committee reviewed projects in the newly created Comprehensive Community Infrastructure funding category. The changes to the Round 2 CCI programs from the Round 1 Infrastructure program reflect the NTIA's desire to see fewer, larger and more comprehensive programs. The structure of the CCI program favors Middle-Mile infrastructure projects that connect to a high number of community anchor institutions. While a CCI project may include a Last-Mile component, the Last-Mile component is a limited aspect of the program, and most Last-Mile- only projects have been directed to the RUS Broadband Initiatives Program. Staff of the e-NC Authority provided administrative support to the Office of Economic Recovery and Investment (OERI) and, upon request, technical advice to the Infrastructure Review Committee.

c. Committee Members

Members of the CCI Subcommittee (and their professional affiliation) included the following:

- Michael Fenton – N.C. Information Technology Services

- Dennis Holton – Craven County Government

- James Lowery[1] – Private Businessman, High Point NC

- John McHugh – Policy Analyst, N.C. Office of Economic Recovery and Investment, Office of the Governor

d. Process

A total of 14 Comprehensive Community Infrastructure applications were included in the list forwarded by the NTIA. Of that total, seven applications responded to e-NC's request for application.

The following applications were reviewed and scored by the CCI Subcommittee:

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[1] CCI Subcommittee Member James Lowery was unable to attend the meeting due to health concerns. However, he did receive all the committee materials, and he did submit his top recommendations for the CCI applications via email.

- City of Charlotte
- Oconee County, SC
- Mountain Area Information Network
- County Executives Telecommunications Network

- Skyport International, Inc.
- MCNC
- University Corporation for Advanced Internet Development

c. Process used for deliberations

The Comprehensive Community Infrastructure Sub-committee met on Thursday, April 22, 2010 at the North Carolina Rural Center to discuss applications. The sub-committee used the scoring sheet that had been developed in Round 1 to score applications based on the factors listed above, focusing only on an application's North Carolina impact. As in Round 1, applications were grouped for discussion and ranked by area impact and technology as follows:

1. Local Area Programs
2. State Programs
   a. Satellite-based
   b. Wireline
3. National Programs

An announcement of the public meeting was placed on the OERI Web site www.ncrecovery.gov, and was open to the public. Since several of the applications were multi-state or national, the meeting was also the subject of a webinar with a call-in number. Sign-in directions were sent directly to applicants and also placed on the OERI Web site so that applicants and the general public could attend virtually, and make comments online or over the phone.

The recommendations of the CCI Subcommittee are discussed in Section 5.

Section 3

Public Computer Center Recommendations

Overview

The PCC/SBA made one primary recommendation for the Public Computer Center category: the **NCDCR State Library Program (NCSL)**. The sub-committee also wanted to highlight the **Winstonnet Inc**. project, and wanted to generally support the redevelopment and potential economic impacts of the **Olive Hill Community Economic Development** and the **Greater Lansing Area Development** projects.

Analysis

The consensus choice for recommendation in the Public Computer Center area was the North Carolina Department of Cultural Resources State Library Program, described below.

The State Library of North Carolina (SLNC) is applying for a PCC grant of $1.5M to improve public library connectivity and computing resources across 35 Tier I counties with unemployment rates well in excess of the national average.

The State Library Program has three primary elements:

1. To increase the connectivity at the branch facilities in the 35 targeted counties to increase the speed and reliability of the free wireless high-speed internet access the library already provides;
2. To fund local library purchase of 280 high-end laptops at the local level in order to:
   a. eliminate long wait times for computer access and,
   b. prevent usage time-limits that exist in several of the targeted facilities
   c. allow patrons of the library to use computer for job search, job training, streaming video, webinar, and on-line job applications, and;
3. Develop a training program for library staff to assist in the implementation, administration, and success of the program.

The committee felt that the SLNC application was "a model program" for the Public Computer Center funding category. The committee thought the proposed project was exemplary, and represented the program that had, if funded, the potential for the highest impact in North Carolina, both to provide meaningful broadband service to an identified at-risk population in the short-term and also had potential for value added benefits over the long term.

In the committee's opinion, the NCSL application presented the most compelling narrative for success of a PCC program. NCSL identifies facilities in need that serve high-unemployment and low-wealth at-risk populations in 35 Tier I North Carolina counties, often in facilities that are the only source of free high-speed internet available in a given county.

The committee commented that the State Library system is a valuable resource in rural North Carolina; often it is the first, and sometimes only, resource available to the unemployed for internet access and job retraining opportunities. Additionally, the NCSL application puts the resources in the hands of the local library administrators, who know the specific needs of the community and what type of outreach is necessary.

The committee felt that the project scope was appropriate, with 35 of the 40 Tier I economically disadvantaged counties involved in the program. The committee thought the program goals were proven and in great need for the targeted at-risk population. High-speed internet and computer access is a resource that is already stretched to the limit in some of the targets' facilities, and the NCSL program directly addressed this problem with a solution that will reduce or eliminate wait times and increase the utility of the service. The program leverages the existing state broadband infrastructure, and would take advantage of the BTOP Round 1award to MCNC to expand the North Carolina Research and Education Network (NCREN). The program would also find synergies with MCNC's BTOP Round 2 CCI application, if it is funded.

The committee felt that the list of partners and supporters of the NCSL application was extremely impressive, and spoke to the high value of the program. The application was created in a partnership with the Bill and Melinda Gates Foundation, a nonprofit and world leader in

education outreach and technology. The foundation also provided funding for a large portion of the program's in-cash match. The NCSL program includes letters of support from MCNC, the North Carolina Community College System, the North Carolina Employment Security Commission and the North Carolina Division of Workforce Development (administrator of the ARRA Workforce Investment Funds and a frequent collaborator with the State Library System). The program was endorsed by Rep. Bill Faison, a legislative leader in the area of rural broadband deployment. NCSL also received support from the North Carolina Golden LEAF Foundation, a non-profit corporation established by North Carolina to promote social welfare and provide economic impact assistance to economically affected or tobacco-dependent regions of North Carolina. Golden LEAF endorsed the NCSL application and assisted with a grant of $200,000 for matching funds.

With program partners The Gates Foundation and Golden LEAF providing match funds, the NCSL program has an almost 35% match, nearly all of which is in-cash. The broad base of support, the proven history of the State Library system, and the current high rate of utilization of the system were all factors that led the committee to believe the NCSL PCC application has high viability and sustainability and, if funded, a high probability of success.

While the PCC/SBA Sub-committee officially recommends only one proposal to Governor Perdue for Round 2, the sub-Committee did want to highlight the Winstonnet PCC Program.

Winstonnet is applying for a PCC grant of $926,000 to expand a county-wide network of 40 public access computer labs in Forsyth County. The current program serves about 40% of the Forsyth County area and has about 59,000 users.

The sub-committee felt that the Winstonnet Program was notable in that it is an established model for the delivery of service that has been successfully in operation since 2003. It has a history of applying for and handling grant funds. Winstonnet's established model, high level of local support, and 42% in in-cash and in-kind match spoke well of the viability and sustainability of the program. The committee also liked the focus on a growing Hispanic population in the Winstonnet service area through Spanish-language computer training.

However, the committee was concerned that the business model of Winstonnet depends on the donation of time, funds, and equipment, which may currently be at historically-low levels. The dependence on donated equipment also means that the training would be on older computers running Windows XP, which raised the concern among the committee members that utility of the training is somewhat limited. Additionally, the PCC application represents only a modest increase in service and is geographically isolated in a single-county service area. Overall, the sub-committee felt that the Winstonnet application was an important program for the area, but did not represent the level of state-wide impact of the NCSL program.

The PCC/SBA Sub-committee wished to make a special mention of two similar programs: the Olive Hill Economic Development Application and the Greater Lansing Area Development Application. In Round I, the PCC/SBA Sub-committee recommended the Mitchell County Courthouse PCC application as the primary recommendation in the PCC category, and that application eventually received a grant award. The Olive Hill and Greater Lansing Area

Programs are similar in that they center on the renovation and repurposing of an existing facility for economic development and retraining purposes.

The Olive Hill Economic Development Project in particular scored very highly with sub-committee members and had a strong Public/Private partnership aspect. The Greater Lansing Area Development also scored highly and had a strong focus on public safety, as it centered on firefighter training. Both programs have a match of 22%, above the required 20% but below the higher match of the NCSL application.

The sub-committee feels that this model of program has the potential for high economic development for a locality. The programs make the best use of existing facilities and tend to be highly tailored to suit local at-risk populations. However, the sub-committee was concerned that these types of programs, which bring high value to their given areas, do not represent a large state impact and do not fall in line with the NTIA's "comprehensive" focus for BTOP Round 2.

Section 4

Sustainable Broadband Adoption Recommendations.

Overview

The PCC/SBA made one primary recommendation for the Sustainable Broadband Adoption category, the **Mountain Area Information Network (MAIN) Cloud Computing Program**. The sub-committee also wanted to highlight the **UNC-Pembroke** and the **Elauwit SBA** projects.

Analysis

The consensus choice for recommendation in the Sustainable Broadband Adoption area was the MAIN Cloud Computing Program Library Program.

The Mountain Area Information Network is a non-profit service provider located in Asheville, North Carolina. The MAIN SBA program is a $2.4 million program that would establish the nation's first cloud-computing platform for broadband adoption in Asheville, North Carolina. "Cloud-computing" is a system allowing a user to operate programs via remote servers rather than on the user's local hardware system. The MAIN program would allow rural users, small businesses, non-profits and students to access powerful applications that otherwise would not be supported by local hardware, and has the potential to "even the playing field" by allowing end-users access to not only the internet but also to a powerful software toolkit.

The MAIN program targets at-risk populations by distributing their wireless network in 10 public-housing neighborhoods in Asheville. The targeted neighborhoods have traditionally housed the working-poor, elderly, immigrants, minorities, and at-risk youth, and have seen a recent rise in a growing cohort of well-educated but underemployed young people, most of whom work in subsistence service-industry and tourism jobs while pursuing "creative class" careers in fields such as green-building, sustainable-living, Web development, digital media, and related fields. The wireless "cloud" would support not only broadband access and remote

program applications, but also job retraining and digital literacy training programs. The training programs developed through this project will be available in English and Spanish.

The sub-committee felt that the MAIN application represented an extremely innovative program utilizing an exciting public/private partnership with Red Hat. While the immediate impact of this program is limited to the Asheville area, the MAIN application is the perfect example of a "test case" project that, if funded, could be used as a prototype to replicate cloud-computing networks in at-risk areas nationwide. The sub-committee felt that the MAIN program, more than any other SBA application, met the NTIA's desire to fund projects that could be successful on their own terms and establish an exportable model for future programs.

The committee commented that MAIN is a long-standing and valuable resource in western North Carolina. MAIN has been providing information services in western North Carolina for 15 years, and has a history of successfully using federal grant money, as the NTIA funded a MAIN Technology Opportunities Program in the mid-1990s. MAIN has an in-depth understanding of the targeted at-risk population, and a long history of serving the area. They have partnered with Red Hat, a North Carolina company and a world technology leader in the area of networking and cloud-computing. They have the support of many key local partners, including the City of Asheville, Buncombe County, ERC, Western Regional Services Alliance (WRESA), the Housing Authority of the City of Asheville (HACA), the City of Asheville, Buncombe County Library System, Buncombe County Health Department, the YMCA and the long-standing YMA.

In the sub-committee's opinion, one of the greatest strengths of the MAIN program is the availability of human resources in the City of Asheville. The MAIN program is an innovative program supported by an extremely diverse and influential group of local partners. The "creative class" referenced in the MAIN application creates a very fertile environment for this type of innovative program that relies on active community participation for its open-source model. Asheville has a long reputation as a city with a creative and innovative spirit, and in the sub-committee's opinion MAIN could not ask for a better location for this program.

The sub-committee had concerns that the MAIN proposal was dependent on parallel applications for BTOP CCI and a BIP funding. However, Wally Bowen, who joined the meeting via conference call, assured the sub-committee that the other applications were synergistic rather than interdependent.

The MAIN program provided a match of more than 31%. The broad base of support, the proven history of the organization, the innovative nature of the project and its ability to be replicated elsewhere if successful were all factors that influenced the choice of MAIN as the overall recommendation in the Sustainable Broadband Adoption category.

While the PCC/SBA sub-committee officially recommends only one proposal to Governor Perdue for Round 2, the sub-committee did want to highlight the UNC-Pembroke and Elauwit SBA Applications.

The UNC-Pembroke SBA application is a $2,055,843.89 project that seeks to establish the Community Interactive Video Collaborative (CIVC) to create interactive video teleconferencing

capabilities that will bring new learning plus personal and economic development activities into five community colleges and two local community sites in a six-county region of Southeastern North Carolina. The UNC-Pembroke application is being submitted as a complementary proposal with MCNC's successful Round 1 and potential Round 2 applications.   The UNC-Pembroke has partnerships with Bladen County, the City of Fayetteville, Sandhills Community College, Robeson Community College, and Brunswick Community College.

The sub-committee felt that this project had a high potential impact for an extremely economically depressed area, and this program scored highly among members of the sub-committee. However, the sub-committee felt that the impact would not be felt state-wide.

The sub-committee felt that because the NTIA put a strong emphasis on service to at-risk populations, and in particular to Native America populations, the sub-committee should comment. UNC-Pembroke was established as the Nation's first public university to serve Native Americans. Additionally, Robeson County, in the service area of the CIVC program, has a large population of Lumbee Indians.

The sub-committee felt that the Elauwit program was another application worth highlighting. The Elauwit program is a $ 14,405,725 project to establish wireless networks in low-income housing developments in southeastern North Carolina. The program would deliver recycled donated computers to housing developments for the purposes of high-speed connectivity, retraining, and computer literacy.

The program has a high level of support from Rocky Mount, NC Public Housing Authority; Greenville, NC Public Housing Authority; Lumberton, NC Public Housing Authority; Statesville, NC Public Housing Authority; Goldsboro, NC Public Housing Authority; Fairmont, NC Public Housing Authority; Pembroke, NC Public Housing Authority; Beaufort, NC Public Housing Authority; Wilmington, NC Public Housing Authority, and the NC Public Housing Authority.

The Elauwit Program had a high level of match, at 30.7%. However, the sub-committee had some concerns over some of the in-kind matches, which included future advertising revenue and a loan agreement. The sub-committee also had concerns over project sustainability, based on the projected up-take rates in the program area.

Representatives of Elauwit commented over the phone, saying that the projects are based on market research, and a similar Elauwit program has been implemented in South Carolina. These financial documents were submitted to NTIA, but were not submitted to the e-NC and were not reviewed by the sub-committee. While the sub-committee thought the Elauwit program had the potential for high-value impact in an economically-disadvantaged area and the potential for both immediate and long-term economic impact, the sustainability issues were enough to keep the them from making this program an official recommendation.

Section 5

Comprehensive Community Infrastructure Programs

Overview

The CCI Sub-committee made two recommendations for the Comprehensive Community Infrastructure category. The primary recommendation was **MCNC's North Carolina Rural Broadband Initiative Program (NCRBI).** The secondary recommendation was the **MAIN CCI Program**.

Analysis

The consensus choice for the primary recommendation in the Comprehensive Community Infrastructure area was the MCNC's NCRBI Program.

MCNC is an independent non-profit established by the state of North Carolina. It operates the North Carolina Research and Education Network, which connects critical anchor institutions such as the state K-12 public schools, charter schools, North Carolina's community college system, the 16 campuses of the University of North Carolina, and the state hospital system. MCNC was a grant awardee in BTOP Round 1, receiving a $28 million grant to complete a $40 million expansion and upgrade to NCREN. MCNC's BTOP Round 1 Application has been cited as a model by the NTIA.

MCNC's NCRBI proposal is an $111,654,323 1802 middle-mile infrastructure traversing 69 counties in four regions of NC. When combined with NCREN's current and planned fiber network, funding of the NCRBI will create a CAI network that spans the entire state with owned dark fiber. The NCBRI program traverses all North Carolina Tier I counties. In 48 of the 69 counties, the per capita income is 80% or less than the national average. Thirty-one counties meet the NTIA definition of economically distressed, which combines unemployment with low per capita income.

The proposal includes direct fiber builds to 45 community college main/satellite campuses, 58 K12 school districts, seven universities, 54 libraries and 14 county/municipal health and public safety agencies in the four region build areas. NCREN already serves community colleges, universities, K12 school districts and county public health and safety agencies. The direct fiber builds will replace bandwidth-limited, leased last-mile circuits. Direct fiber will allow these community anchor institutions to substantially upgrade their connections to the state's public sector intranet, the commercial Internet, and advanced research networks such as Internet2 and National LambdaRail.

While the NCRBI program is middle-mile only, further expanding NCREN, MCNC has been a national leader in forging public/private partnerships with last-mile internet service providers (ISP). MCNC has sought out partners in every area of the Round 2 proposed build area, and has been one of the few applicants who has found a way to make the NTIA's goal of public private partnership a reality.

The MCNC proposal has a large and significant amount of support across North Carolina. Of the 972 pages of the submitted Round 2 applications, more than 260 pages are partnerships and letters of support. The NCRBI received not only an endorsement by Golden LEAF, but the organization supported the MCNC application with matching funds with a $28 million grant. That grant, with an additional $5 million in land and fiber donations, brings the total match for NCRBI to just above 30%. NCRBI also leverages the MCNC Round 1 award by expanding on the work to increase the size, speed and stability of NCREN.

The NCRBI is the virtual keystone for North Carolina BTOP programs. The project supports several projects in both the BTOP and BIP programs, including the NCSL program, US UCAN, the Town of Red Oak, the Counties of Surrey and Rockingham BIP proposal, and the various MAIN proposals. The NCRBI includes the proposed service area of the ERC Round 1 proposal, which was a recommendation of the Governor in Round 1.

The sub-committee felt that the NCRBI proposal, if funded, improves the broadband infrastructure for the entire state. NCRBI has the capability to lower broadband prices for the entire state as it demonstrates how to solve the problems of public-private partnerships. The program would help stabilize the cost of providing stable, high-speed internet to all public educational institutions in the state and would have the secondary effect of helping to stabilize the ever- increasing broadband costs in the state budget.

The sub-committee felt that the size, scope, and potential impact of the MCNC application placed it head and shoulders above all other applications in the CCI category. The NCRBI program should act as a model for other states for the establishment of a truly comprehensive and integrated network. The sub-committee feels that the MCNC proposal represents the future of public broadband infrastructure in North Carolina.

The secondary recommendation made by the CCI Sub-committee was the MAIN CCI proposal.

The MAIN proposal is a middle-mile $7.5 program to extend MAIN's existing fiber network to 42 community-anchor sites in 10 public-housing and low-income neighborhoods in Asheville, North Carolina. The MAIN CCI proposal has a strong public-safety aspect, serves 12 fire stations, and provides streaming security video to at-risk communities.

As in the SBA proposal, the MAIN CCI proposal has a broad base of support within the community and state wide. Supporters include ERC, MCNC, technology partner Red Hat, the City of Asheville, the Land of Sky Council of Government, and long-standing community institutions. The program serves a low-income area of Asheville, which is unlikely to see another ISP. MAIN's CCI proposal is independent of, but highly synergistic with, the MAIN SBA program recommended above.

The sub-committee had three primary reservations with the MAIN CCI program. The first was that the MAIN CCI proposal is a regional program, centered in a single county in North Carolina. However, the sub-committee recognizes the high-value impact the MAIN program would have in the area and that it would set the stage for the innovating SBA program.

Additionally, the MAIN CCI project has the support of MCNC and ECR, two long-time advocates for rural broadband implementation.

The second concern is the MAIN CCI match. The MAIN CCI proposal asks for a $6.477 million grant and only provides a 14.1% in-kind match of $1.05 million. While this is below the program requirements, MAIN does include the necessary waiver requests. While this is well below the 30% match recommended by NTIA in outreach documents, the sub-committee recognizes that MAIN only listed in-kind match of actual equipment and did not, as was the case on other BTOP applications, attempt to "game" the application by including salaries of managers and program income as part of the match.

The final concern is that MAIN is currently delinquent in Federal Payments. The narrative of the MAIN application explains how the delinquency occurred, and MAIN acted in good faith once the delinquency was discovered. MAIN is now current with payments, but is appealing late fees and penalties involved with the delinquency. The sub-committee felt that the factors that the delinquency was not the fault of MAIN, that MAIN acted in good-faith to settle the delinquency, and the importance of the MAIN middle-mile proposal for the Asheville area and the MAIN SBA proposal was enough reason to overcome these concerns and recommend the MAIN proposal to the Governor.

Section 6

Conclusion

The BTOP Review Committee would again like to thank the Governor for the opportunity to provide review and comment for this important ARRA Recovery project. The committee feels that high speed broadband development, the increase in the availability of public computing centers and public broadband access, and the establishment of new and innovative access programs is not only important for immediate economic and educational impact, but critical to move North Carolina's economy from an agricultural and manufacturing base to a robust and competitive 21st Century Economy.

If there was a central theme to the two sub-committee meetings, it was that what was best for North Carolina was the development of programs and investments *in* North Carolina. The recommendations from both sub-committees reflect a clear preference for the development of comprehensive and innovative programs that provide a platform for future growth in broadband outreach and demand in North Carolina.